

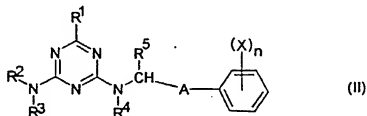
Patent Claims:

1. A herbicide combination comprising a synergistically effective amount of components (A) and (B), where

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(A) comprises one or more herbicidally active aminotriazine compounds (I) from the group of the compounds of the formulae (II), (III), (IV) and (V), where the compounds are:

10 - compounds of the formula (II) and their salts



in which

R<sup>1</sup> is (C<sub>1</sub>-C<sub>6</sub>)-alkyl,

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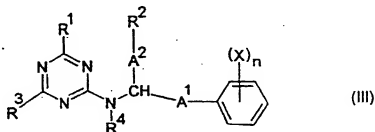
which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, cyano, nitro, thiocyanato, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkylthio, (C<sub>1</sub>-C<sub>4</sub>)-alkylsulfinyl, (C<sub>1</sub>-C<sub>4</sub>)-alkylsulfonyl, (C<sub>2</sub>-C<sub>4</sub>)-alkenyl, (C<sub>2</sub>-C<sub>4</sub>)-alkynyl, phenyl, which is unsubstituted or substituted, and heterocyclyl having 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, the ring being unsubstituted or substituted,

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- $R^2$  and  $R^3$  in each case independently of one another are hydrogen, amino or alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarbonoxy radical having in each case 1 to 10 carbon atoms or a heterocyclyl radical, heterocycloxy radical or heterocyclylamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical or
- $R^2$  and  $R^3$  together with the nitrogen atom of the group  $NR^2R^3$  are a heterocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms, where the further hetero ring atoms which are optionally present in addition to the nitrogen atom are selected from the group consisting of N, O and S and the radical is unsubstituted or substituted,
- $R^4$  is hydrogen, amino, alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarbonoxy radical having in each case 1 to 10 carbon atoms, preferably having 1 to 6 carbon atoms or a heterocyclyl radical, heterocycloxy radical or heterocyclylamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical,
- $R^5$  is hydrogen, halogen, nitro, cyano, thiocyanato or a radical of the formula  $-B^1-Y^1$ , where  $B^1$  and  $Y^1$  are as defined below,
- A is an alkylene radical having 1 to 5 straight-chain carbon atoms or alkenylene or alkynylene having in each case 2 to 5 straight-chain carbon atoms, where each of the three last-mentioned diradicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, nitro, cyano, thiocyanato and a radical of the formula  $-B^2-Y^2$ ,
- $(X)_n$  are n substituents X, where X in each case independently of one another, is halogen,  $(C_1-C_6)$ -alkyl,  $(C_2-C_6)$ -alkenyl,  $(C_2-C_6)$ -alkynyl,

- (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>2</sub>-C<sub>6</sub>)-alkenyloxy, (C<sub>2</sub>-C<sub>6</sub>)-alkynyloxy, [(C<sub>1</sub>-C<sub>4</sub>)-alkyl]-carbonyl, [(C<sub>1</sub>-C<sub>4</sub>)-alkoxy]-carbonyl or [(C<sub>1</sub>-C<sub>4</sub>)-alkylthio]-carbonyl, where the hydrocarbon-containing moieties in the 9 last-mentioned radicals are unsubstituted or substituted, or is a radical of the formula -B<sup>o</sup>-R<sup>o</sup>, where B<sup>o</sup> is as defined below and R<sup>o</sup> is an aromatic, saturated or partially saturated carbocyclic or heterocyclic radical, where the cyclic radical is substituted or unsubstituted, or two adjacent radicals X together are a fused-on cycle having 4 to 6 ring atoms which is carbocyclic or contains hetero ring atoms selected from the group consisting of O, S and N and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C<sub>1</sub>-C<sub>4</sub>)-alkyl and oxo,
- n is 0, 1, 2, 3, 4 or 5,
- B<sup>o</sup>, B<sup>1</sup>, B<sup>2</sup> in each case independently of one another are a direct bond or a divalent group of the formula -O-, -S(O)<sub>p</sub>-, -S(O)<sub>p</sub>-O-, -O-S(O)<sub>p</sub>-, -CO-, -O-CO-, -CO-O-, -NR<sup>+</sup>-, -O-NR<sup>+</sup>-, -NR<sup>+</sup>-O-, -NR<sup>+</sup>-CO-, -CO-NR<sup>+</sup>-, where p = 0, 1 or 2 and R<sup>+</sup> is hydrogen, alkyl having 1 to 6 carbon atoms, phenyl, benzyl, cycloalkyl having 3 to 6 carbon atoms or alkanoyl having 1 to 6 carbon atoms,
- Y<sup>1</sup>, Y<sup>2</sup> in each case independently of one another are H or an acyclic hydrocarbon radical having in each case, for example, 1 to 20 carbon atoms or a cyclic hydrocarbon radical having 3 to 8 carbon atoms or a heterocyclic radical having 3 to 9 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the three last-mentioned radicals is unsubstituted or substituted.

- compounds of the formula (III) or their salts

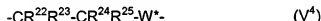
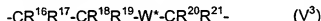
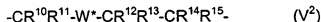


in which

- $R^1$  is aryl, which is unsubstituted or substituted, or (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl, which is unsubstituted or substituted, or heterocyclyl, which is substituted or unsubstituted, or
- 5 (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>2</sub>-C<sub>6</sub>)-alkenyl or (C<sub>2</sub>-C<sub>6</sub>)-alkynyl,
- where each of the 3 last-mentioned radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, nitro, thiocyanato, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-haloalkoxy, (C<sub>2</sub>-C<sub>4</sub>)-
- 10 alkenyloxy, (C<sub>2</sub>-C<sub>4</sub>)-haloalkenyloxy, (C<sub>1</sub>-C<sub>4</sub>)-alkylthio, (C<sub>1</sub>-C<sub>4</sub>)-alkylsulfinyl, (C<sub>1</sub>-C<sub>4</sub>)-alkylsulfonyl, (C<sub>1</sub>-C<sub>4</sub>)-haloalkylsulfinyl, (C<sub>1</sub>-C<sub>4</sub>)-haloalkylsulfonyl and (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl, which is unsubstituted or substituted, and phenyl, which is unsubstituted or substituted, and heterocyclyl, which is
- 15 unsubstituted or substituted, and radicals of the formulae R'-C(=Z')-, R'-C(=Z')-Z-, R'-Z-C(=Z')-, R'R''N-C(=Z')-, R'-Z-C(=Z')-O-, R'R''N-C(=Z')-Z-, R'-C(=Z')-NR''- and R'R''N-C(=Z')-NR'''-, in which R', R'' and R''' in each case independently of one another are (C<sub>1</sub>-C<sub>6</sub>)-alkyl, aryl, aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>9</sub>)-
- 20 cycloalkyl or (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl, where each of the 5 last-mentioned radicals is unsubstituted or substituted, and in which Z and Z' independently of one another are each an oxygen or sulfur atom,
- $R^2$  is (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl, which is unsubstituted or substituted, (C<sub>4</sub>-C<sub>9</sub>)-cycloalkenyl, which is unsubstituted or substituted, heterocyclyl, which is unsubstituted or substituted, or phenyl, which is unsubstituted or substituted,
- 25
- $R^3$  is hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, aryl or (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl, where each of the 3 last-mentioned radicals is unsubstituted or substituted, or a radical of the formula -N(B<sup>1</sup>-D<sup>1</sup>)(B<sup>2</sup>-D<sup>2</sup>) or -NR'-N(B<sup>1</sup>-D<sup>1</sup>)(B<sup>2</sup>-D<sup>2</sup>), in which in each case B<sup>1</sup>, B<sup>2</sup>, D<sup>1</sup> and D<sup>2</sup> are as defined below and R' is hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl or [(C<sub>1</sub>-C<sub>4</sub>)-alkyl]-carbonyl,
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- $R^4$  is a radical of the formula -B<sup>3</sup>-D<sup>3</sup>, where B<sup>3</sup> and D<sup>3</sup> are as defined below,

A<sup>1</sup> is straight-chain alkylene having 1 to 5 carbon atoms or straight-chain alkenylene or alkynylene having in each case 2 to 5 carbon atoms, where each of the three last-mentioned diradicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, nitro, cyano, thiocyanato and radicals of the formula -B<sup>4</sup>-D<sup>4</sup>, where B<sup>4</sup> and D<sup>4</sup> are as defined below,

A<sup>2</sup> is a direct bond or straight-chain alkylene having 1 to 4 carbon atoms or straight-chain alkenylene or alkynylene having in each case 2 to 5 carbon atoms, where each of the three last-mentioned diradicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, nitro, cyano, thiocyanato and radicals of the formula -B<sup>5</sup>-D<sup>5</sup>, or a divalent radical of the formula V<sup>1</sup>, V<sup>2</sup>, V<sup>3</sup>, V<sup>4</sup> or V<sup>5</sup>,



where each of the radicals R<sup>6</sup> to R<sup>27</sup>, in each case independently of one another, is hydrogen, halogen, nitro, cyano, thiocyanato or a radical of the formula -B<sup>6</sup>-D<sup>6</sup>,

W\* is in each case an oxygen atom, a sulfur atom or a group of the formula N(B<sup>7</sup>-D<sup>7</sup>) and

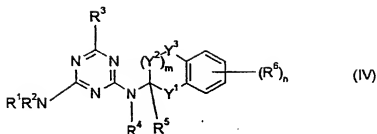
B<sup>5</sup>, B<sup>6</sup>, B<sup>7</sup>, D<sup>5</sup>, D<sup>6</sup> and D<sup>7</sup> are as defined below,

B<sup>1</sup>, B<sup>2</sup>, B<sup>3</sup> and B<sup>7</sup> in each case independently of one another are a direct bond or a divalent group of the formulae -C(=Z\*), -C(=Z\*)-Z\*\*, -C(=Z\*)-NH- or -C(=Z\*)-NR\*, where Z\* = an oxygen or sulfur atom, Z\*\* = an oxygen or sulfur atom and R\* = (C<sub>1</sub>-C<sub>6</sub>)-alkyl, aryl, aryl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl or (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>6</sub>)-alkyl, where each of the 5 last-mentioned radicals is unsubstituted or substituted,

- $B^4$ ,  $B^5$  and  $B^6$  in each case independently of one another are a direct bond or a divalent group of the formulae  $-O-$ ,  $-S(O)_p-$ ,  $-S(O)_pO-$ ,  $-O-S(O)_p-$ ,  $-CO-$ ,  $-O-CO-$ ,  $-CO-O-$ ,  $-S-CO-$ ,  $-CO-S-$ ,  $-S-CS-$ ,  $-CS-S-$ ,  $-O-CO-O-$ ,  $-NR^O-$ ,  $-O-NR^O-$ ,  $-NR^O-O-$ ,  $-NR^O-CO-$ ,  $-CO-NR^O-$ ,  $-O-CO-NR^O-$  or  $-NR^O-CO-O-$ , where  $p$  is the integer 0, 1 or 2 and  $R^O$  is hydrogen,  $(C_1-C_6)$ -alkyl, aryl, aryl- $(C_1-C_6)$ -alkyl,  $(C_3-C_9)$ -cycloalkyl or  $(C_3-C_9)$ -cycloalkyl- $(C_1-C_6)$ -alkyl, where each of the 5 last-mentioned radicals is unsubstituted or substituted,
- $D^1$ ,  $D^2$ ,  $D^3$ ,  $D^4$ ,  $D^5$  and  $D^6$  in each case independently of one another are hydrogen,  $(C_1-C_6)$ -alkyl, aryl, aryl- $(C_1-C_6)$ -alkyl,  $(C_3-C_9)$ -cycloalkyl or  $(C_3-C_9)$ -cycloalkyl- $(C_1-C_6)$ -alkyl, where each of the 5 last-mentioned radicals is unsubstituted or substituted, or in each case two radicals  $D^5$  of two groups  $-B^5-D^5$  attached to one carbon atom are attached to one another forming an alkylene group having 2 to 4 carbon atoms which is unsubstituted or substituted by one or more radicals selected from the group consisting of  $(C_1-C_4)$ -alkyl and  $(C_1-C_4)$ -alkoxy,
- $(X)_n$  are  $n$  substituents  $X$ , where  $X$ , in each case independently of one another, is halogen, hydroxyl, amino, nitro, formyl, carboxyl, cyano, thiocyanato, aminocarbonyl or  $(C_1-C_6)$ -alkyl,  $(C_1-C_6)$ -alkoxy,  $(C_1-C_6)$ -alkylthio, mono- $(C_1-C_6)$ -alkylamino, di- $(C_1-C_4)$ -alkylamino,  $(C_2-C_6)$ -alkenyl,  $(C_2-C_6)$ -alkynyl,  $[(C_1-C_6)\text{-alkyl}]\text{-carbonyl}$ ,  $[(C_1-C_6)\text{-alkoxy}]\text{-carbonyl}$ , mono- $(C_1-C_6)$ -alkylaminocarbonyl, di- $(C_1-C_4)$ -alkylaminocarbonyl,  $N\text{-(}C_1-C_6\text{)-alkanoyl-amino}$  or  $N\text{-(}C_1-C_4\text{)-alkanoyl-N-(}C_1-C_4\text{)-alkylamino}$ , where each of the 13 last-mentioned radicals is unsubstituted or substituted, preferably unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, amino, nitro, formyl, carboxyl, cyano, thiocyanato,  $(C_1-C_4)$ -alkoxy,  $(C_1-C_4)$ -haloalkoxy,  $(C_1-C_4)$ -alkylthio,  $(C_1-C_4)$ -haloalkylthio, mono- $(C_1-C_4)$ -alkylamino, di- $(C_1-C_4)$ -alkylamino,  $(C_3-C_9)$ -cycloalkyl,  $(C_3-C_9)$ -cycloalkylamino,  $[(C_1-C_4)\text{-alkyl}]\text{-carbonyl}$ ,  $[(C_1-C_4)\text{-alkoxy}]\text{-carbonyl}$ , aminocarbonyl, mono- $(C_1-C_4)$ -alkylaminocarbonyl, di- $(C_1-C_4)$ -alkylaminocarbonyl, phenyl, phenoxy, phenylthio, phenylcarbonyl, heterocyclyl, heterocycloxy,

- heterocyclylthio and heterocyclylamino, where each of the 8 last-mentioned radicals is unsubstituted or substituted by one or more substituents selected from the group consisting of halogen, nitro, cyano, (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-alkoxy, (C<sub>1</sub>-C<sub>4</sub>)-alkylthio, (C<sub>1</sub>-C<sub>4</sub>)-haloalkyl, (C<sub>1</sub>-C<sub>4</sub>)-haloalkoxy, formyl, (C<sub>1</sub>-C<sub>4</sub>)-alkyl-carbonyl and (C<sub>1</sub>-C<sub>4</sub>)-alkoxy-carbonyl,
- or (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl, (C<sub>3</sub>-C<sub>9</sub>)-cycloalkoxy, (C<sub>3</sub>-C<sub>9</sub>)-cycloalkylamino, phenyl, phenoxy, phenylthio, phenylcarbonyl, heterocyclyl, heterocyclyloxy, heterocyclylthio or heterocyclylamino, where each of the 11 last-mentioned radicals is unsubstituted or substituted, or two adjacent radicals X together are a fused-on cycle having 4 to 6 ring atoms which is carbocyclic or contains hetero ring atoms selected from the group consisting of O, S and N and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C<sub>1</sub>-C<sub>4</sub>)-alkyl and oxo,
- n is 0, 1, 3, 4 or 5 and
- "heterocyclyl" in the radicals mentioned above, independently of one another, is in each case a heterocyclic radical having 3 to 7 ring atoms and 1 to 3 heteroatoms selected from the group consisting of N, O and S,
- where
- a) the total of the carbon atoms in the radicals A<sup>1</sup> and A<sup>2</sup>-R<sup>2</sup> is at least 6 carbon atoms or
  - b) the total of the carbon atoms in the radicals A<sup>1</sup> and A<sup>2</sup>-R<sup>2</sup> is 5 carbon atoms and A<sup>1</sup> = a group of the formula -CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>- and R<sup>1</sup> = (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>1</sub>-C<sub>4</sub>)-haloalkyl, (C<sub>2</sub>-C<sub>6</sub>)-haloalkenyl or (C<sub>3</sub>-C<sub>9</sub>)-cycloalkyl, which is unsubstituted or substituted;

- compounds of the formula (IV) or their salts



in which

$R^1$  and  $R^2$  in each case independently of one another are hydrogen, amino, alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarboxy radical having in each case 1 to 10 carbon atoms or a heterocyclyl radical, heterocycloxy radical, heterocyclthio radical or heterocycllamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical or

$R^1$  and  $R^2$  together with the nitrogen atom of the group  $NR^1R^2$  are a heterocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms, where any further hetero ring atoms present in addition to the nitrogen atom are selected from the group consisting of N, O and S and the radical is unsubstituted or substituted,

$R^3$  is halogen, cyano, thiocyanato, nitro or a radical of the formula  $-Z^1-R^7$ ,

$R^4$  is hydrogen, amino, alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarboxy radical having in each case 1 to 10 carbon atoms or a heterocyclyl radical, heterocycloxy radical or heterocycllamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical,

$R^5$  is halogen, cyano, thiocyanato, nitro or a radical of the formula  $-Z^2-R^8$ ,



$R^6$ , in the case where  $n=1$ , or the radicals  $R^6$  in each case independently of one another, if  $n$  is greater than 1, is/are halogen, cyano, thiocyanato, nitro or a group of the formula  $-Z^3-R^9$ ,

$R^7, R^8, R^9$  in each case independently of one another are

- 5        - hydrogen or
- an acyclic hydrocarbon radical, where carbon atoms in the chain may be substituted by heteroatoms selected from the group consisting of N, O and S, or
- a cyclic hydrocarbon radical or
- 10       - a heterocyclic radical,

where each of the 3 last-mentioned radicals is unsubstituted or substituted,

$Z^1, Z^2, Z^3$  in each case independently of one another are

- a direct bond or
- 15       - a divalent group of the formula  $-O-$ ,  $-S(O)_p-$ ,  $-S(O)_p-O-$ ,  $-O-S(O)_p-$ ,  $-CO-$ ,  $-CS-$ ,  $-S-CO-$ ,  $-CO-S-$ ,  $-O-CS-$ ,  $-CS-O-$ ,  $-S-CS-$ ,  $-CS-S-$ ,  $-OCO-$ ,  $-CO-O-$ ,  $-NR'-$ ,  $-O-NR'-$ ,  $-NR'-O-$ ,  $-NR'-CO-$  or  $-CO-NR'-$ , where

$p = 0, 1$  or  $2$  and  $R'$  is hydrogen, alkyl having 1 to 6 carbon atoms, phenyl, benzyl, cycloalkyl having 3 to 6 carbon atoms or alkanoyl having 1 to 6 carbon atoms,

- 20       where each of the 3 last-mentioned radicals is unsubstituted or substituted,
- $Y^1, Y^2, Y^3$  and, if  $m$  is 2, 3 or 4, further groups  $Y^2$  are, in each case independently of one another,

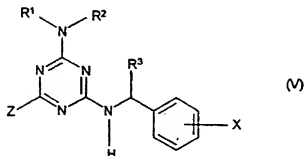
- a divalent group of the formula  $CR^aR^b$ , where  $R^a$  and  $R^b$  are
- 25       identical or different and are in each case a radical selected from the group of the radicals possible for  $R^7$  to  $R^9$ , or
- a divalent group of the formula  $-O-$ ,  $-CO-$ ,  $-C(=NR')-$ ,  $-S(O)_q-$ ,  $-NR'-$  or  $-N(O)-$ , where  $q = 0, 1$  or  $2$  and  $R'$  is hydrogen or alkyl having 1 to 4 carbon atoms, or

- 30       -  $Y^1$  or  $Y^3$  is a direct bond,
- where two oxygen atoms of groups  $Y^2$  and  $Y^3$  are not adjacent,

$m$  is 1, 2, 3 or 4,

$n$  is 0, 1, 2, 3 or 4;

- substituted 2,4-diamino-1,3,5-triazines of the formula (V),



in which

- 5         $R^1$  is hydrogen or unsubstituted or hydroxyl-, cyano-, halogen- or  $C_1$ - $C_4$ -alkoxy-substituted alkyl having 1 to 6 carbon atoms,
- $R^2$  is hydrogen, formyl, in each case unsubstituted or cyano-, halogen- or  $C_1$ - $C_4$ -alkoxy-substituted alkyl, alkylcarbonyl, alkoxy carbonyl or alkylsulfonyl having in each case 1 to
- 10       6 carbon atoms in the alkyl groups, or is in each case unsubstituted or cyano-, halo- $C_1$ - $C_4$ -alkyl-,  $C_1$ - $C_4$ -alkoxy-, halo- $C_1$ - $C_4$ -alkoxy- or  $C_1$ - $C_4$ -alkoxycarbonyl-substituted phenylcarbonyl, naphthylcarbonyl, phenylsulfonyl or naphthylsulfonyl,
- 15        $R^3$  is unsubstituted or cyano-, halogen- or  $C_1$ - $C_4$ -alkoxy-substituted alkyl having 1 to 6 carbon atoms or is unsubstituted or cyano-, halogen- or  $C_1$ - $C_4$ -alkyl-substituted cycloalkyl having 3 to 6 carbon atoms,
- X is a substituent selected from the group below:
- 20       hydroxyl, cyano, nitro, halogen, in each case unsubstituted or hydroxyl-, cyano- or halogen-substituted alkyl or alkoxy having in each case 1 to 6 carbon atoms, in each case unsubstituted or halogen-substituted alkylcarbonyl, alkoxy carbonyl, alkylthio, alkylsulfinyl or alkylsulfonyl having
- 25       in each case 1 to 6 carbon atoms in the alkyl groups, in each case unsubstituted or hydroxyl-, cyano-, nitro-, halogen-,  $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_4$ -haloalkyl-,  $C_1$ - $C_4$ -alkoxy- or  $C_1$ - $C_4$ -haloalkoxy-substituted phenyl or phenoxy, and

- Z is hydrogen, hydroxyl, halogen, is in each case unsubstituted or hydroxyl-, cyano-, nitro-, halogen-, C<sub>1</sub>-C<sub>4</sub>-alkoxy-, C<sub>1</sub>-C<sub>4</sub>-alkylcarbonyl-, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl-, C<sub>1</sub>-C<sub>4</sub>-alkylthio-, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl- or C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl-substituted alkyl, alkoxy, alkylcarbonyl, alkoxycarbonyl, alkylthio, alkylsulfinyl or alkylsulfonyl, having in each case 1 to 6 carbon atoms in the alkyl groups, is in each case unsubstituted or halogen-substituted alkenyl or alkynyl having in each case 2 to 6 carbon atoms or is unsubstituted or cyano-, halogen- or C<sub>1</sub>-C<sub>4</sub>-alkyl-substituted cycloalkyl having 3 to 6 carbon atoms,

and

(B) is one or more herbicides selected from the group of compounds consisting of

- (B1) foliar- and/or soil-acting herbicides which are active against monocotyledonous harmful plants selected from the group consisting of
- (B1.1.1) isoproturon,
  - (B1.1.2) chlorotoluron,
  - (B1.2.1) flufenacet,
  - (B1.2.2) pendimethalin,
  - (B1.2.3) prosulfocarb,
  - (B1.3.1) clodinafop-propargyl,
  - (B1.3.2) diclofop-methyl,
  - (B1.3.3) fenoxaprop-P-ethyl and fenoxaprop-ethyl,
  - (B1.3.4) quizalofop-P and its salts and esters and quizalofop and its salts and esters,
  - (B1.3.5) fluazifop-P and its esters and fluazifop and its esters,
  - (B1.3.6) haloxyfop and haloxyfop-P and their esters,
  - (B1.3.7) propaquizafop (PM, p. 1021-1022),
  - (B1.3.8) cyhalofop and its esters,
  - (B1.4.1) sethoxydim,
  - (B1.4.2) cycloxydim
  - (B1.4.3) clethodim,
  - (B1.4.4) clefoxidim,
  - (B1.4.5) tralkoxidim,
  - (B1.5.1) dimethenamid,

	(B1.5.2)	pentoxamid,
	(B1.5.3)	butachlor,
	(B1.5.4)	pretilachlor,
	(B1.6.1)	imazamethabenz-methyl
5	(B1.6.2)	simazin
	(B1.6.3)	molinate
	(B1.6.4)	thiobencarb
	(B1.6.4)	MY 100,
	(B1.6.5)	anilofos,
10	(B1.6.6)	cafenstrole,
	(B1.6.7)	mefenacet,
	(B1.6.8)	fentrazamid,
	(B1.6.9)	thiazopyr,
	(B1.6.10)	oxadiazon,
15	(B1.6.11)	esprocarb,
	(B1.6.12)	pyributicarb,
	(B1.6.13)	azimsulfuron,
	(B1.6.14)	AEB391 and related azoles,
	(B1.6.15)	thienylchlor,
20	(B1.6.16)	pentoxazone,
	(B1.6.17)	pyriminobac and pyriminobac-methyl,
	(B1.6.18)	flucarbazone and its salts and
	(B1.6.19)	procarbazon and its salts,
25	(B2)	herbicides which are active predominantly against dicotyledonous harmful plants selected from the group consisting of
	(B2.1.1)	tribenuron-methyl,
	(B2.1.2)	thifensulfuron and its esters,
	(B2.1.3)	prosulfuron,
30	(B2.1.4)	amidosulfuron,
	(B2.1.5)	chlorimuron and its esters,
	(B2.1.6)	halosulfuron and its esters and salts,
	(B2.1.7)	LAB271272, (= tritosulfuron),
	(B2.1.8)	bensulfuron-methyl,
35	(B2.1.9)	ethoxysulfuron,
	(B2.1.10)	cinosulfuron,
	(B2.1.11)	pyrazosulfuron and its esters,
	(B2.1.12)	imazosulfuron,
	(B2.1.13)	cyclosulfamuron,

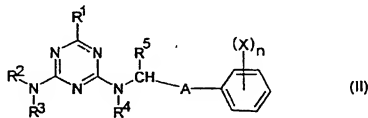
	(B2.2.1)	MCPA,
	(B2.2.2)	2,4-D,
	(B2.2.3)	dichlorprop,
	(B2.2.4)	mecoprop-(P),
5	(B2.2.5)	fluoroxypyr,
	(B2.2.6)	dicamba,
	(B2.2.7)	clopyralid,
	(B2.2.8)	picloram,
	(B.2.3.1)	bromoxynil,
10	(B.2.3.2)	ioxynil,
	(B2.4.1)	fluoroglycofen-ethyl,
	(B2.4.2)	aclonifen,
	(B2.4.3)	acifluorfen and its salts,
	(B2.5.1)	cloransulam and its esters
15	(B2.5.2)	florasulam,
	(B2.6.1)	bentazone,
	(B2.6.2)	bifenox,
	(B2.6.3)	carfentrazone-ethyl,
	(B2.6.4)	pyraflufen,
20	(B2.6.5)	pyridate,
	(B2.6.6)	linuron,
	(B2.6.7)	diflufenzopyr and its salts,
	(B2.6.8)	cinidon-ethyl,
	(B2.6.9)	clopyralid and its salts and esters,
25	(B2.6.10)	metribuzin,
	(B2.6.11)	picolinafen,
	(B2.6.12)	clomazone,
	(B2.6.13)	bromobutide,
	(B2.6.14)	benfuresate,
30	(B2.6.15)	dithiopyr and
	(B2.6.16)	triclopyr and its salts and esters,
	(B3)	herbicides which are active against monocotyledonous and dicotyledonous harmful plants selected from the group consisting of
35	(B3.1.1)	metsulfuron and its esters,
	(B3.1.2)	triasulfuron,
	(B3.1.3)	chlorsulfuron,
	(B3.1.4)	iodosulfuron-methyl,
	(B3.1.5)	AEF060,

	(B3.1.6)	sulfosulfuron,
	(B3.1.7)	flupyrsulfuron and its salts,
	(B3.1.8)	nicosulfuron,
	(B3.1.9)	rimsulfuron,
5	(B3.1.10)	primisulfuron and esters,
	(B3.1.11)	AEF360,
	(B3.2.1)	cyanazin
	(B3.2.2)	atrazin
	(B3.2.3)	terbuthylazin,
10	(B3.2.4)	terbutryn,
	(B3.3.1)	acetochlor
	(B3.3.2)	metolachlor,
	(B3.3.3)	alachlor,
	(B3.4.1)	clomazone,
15	(B3.4.2)	diflufenican,
	(B3.4.3)	flumetsulam,
	(B3.4.4)	flurtamone,
	(B3.4.5)	isoxaflutole,
	(B3.4.6)	metosulam,
20	(B3.4.7)	metribuzin,
	(B3.4.8)	paraquat (salts),
	(B3.4.9)	benoxacor,
	(B3.4.10)	sulcotrione,
	(B3.4.11)	mesotrione,
25	(B3.4.12)	quinclorac,
	(B3.4.13)	propanil,
	(B3.4.14)	bispyribac, bispyribac-Na,
	(B3.4.15)	LGC 40863 (pyribenzoxim),
	(B3.4.16)	oxadiargyl,
30	(B3.4.17)	norflurazon,
	(B3.4.18)	fluometuron,
	(B3.4.19)	methylarsonic acid and its salts (DSMA, MSMA).
	(B3.4.20)	prometryn,
35	(B3.4.21)	trifluralin,

(B4) herbicides which are active against monocotyledonous and dicotyledonous harmful plants and which can be employed specifically in tolerant crops or on non-crop land, selected from the group consisting of

- (B4.1.1) glufosinate,  
 (B4.1.2) glufosinate monoammonium salt,  
 (B4.1.3) L-glufosinate,  
 (B4.1.4) L-glufosinate monoammonium salt,  
 5 (B4.1.5) bilanafos,  
 (B4.2.1) glyphosate,  
 (B4.2.2) glyphosate monoisopropylammonium salt,  
 (B4.2.3) glyphosate sodium salt,  
 (B4.2.4) sulfosate,  
 10 (B4.3.1) imazapyr,  
 (B4.3.2) imazethapyr  
 (B4.3.3) imazamethabenz, and its salts and esters,  
 (B4.3.4) imazamox and its salts and esters,  
 (B4.3.5) imazaquin and its salts and esters,  
 15 (B4.3.6) imazapic (AC 263,222) and its salts and esters  
 (B4.4.1) WC9717 or CGA276854,  
 (B4.4.2) azafenidin,  
 (B4.4.3) diuron and  
 (B4.4.4) oxyfluorfen,  
 20 and, if appropriate, their agriculturally useful salts.

2. The herbicide combination as claimed in claim 1 which comprises, as component (A), one or more compounds of the formula (II) and their salts,



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in which

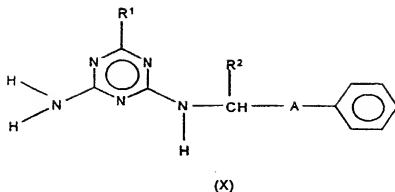
$R^1$  is  $(C_1-C_6)$ -alkyl,

which is unsubstituted or substituted by one or more radicals selected from the group consisting of: halogen, cyano, nitro,  
 30 thiocyanato,  $(C_1-C_4)$ -alkoxy,  $(C_1-C_4)$ -alkylthio,  $(C_1-C_4)$ -alkylsulfinyl,  $(C_1-C_4)$ -alkylsulfonyl,  $(C_2-C_4)$ -alkenyl,  $(C_2-C_4)$ -alkynyl, phenyl, which is unsubstituted or substituted, and heterocycl having 3 to 6 ring

- atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, the ring being unsubstituted or substituted,  $R^2$  and  $R^3$  in each case independently of one another are hydrogen, amino or alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarbonoxy radical having in each case 1 to 10 carbon atoms or a heterocyclyl radical, heterocyclyloxy radical or heterocyclylamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical or  $R^2$  and  $R^3$  together with the nitrogen atom of the group  $NR^2R^3$  are a heterocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms, where the further hetero ring atoms which are optionally present in addition to the nitrogen atom are selected from the group consisting of N, O and S and the radical is unsubstituted or substituted,
- $R^4$  is hydrogen, amino, alkylamino or dialkylamino having in each case 1 to 6 carbon atoms in the alkyl radical, an acyclic or cyclic hydrocarbon radical or hydrocarbonoxy radical having in each case 1 to 10 carbon atoms, preferably having 1 to 6 carbon atoms or a heterocyclyl radical, heterocyclyloxy radical or heterocyclylamino radical having in each case 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the five last-mentioned radicals is unsubstituted or substituted, or an acyl radical,
- $R^5$  is hydrogen, halogen, nitro, cyano, thiocyanato or a radical of the formula  $-B^1-Y^1$ , where  $B^1$  and  $Y^1$  are as defined below,
- A is an alkylene radical having 1 to 5 straight-chain carbon atoms or alkenylene or alkynylene having in each case 2 to 5 straight-chain carbon atoms, where each of the three last-mentioned diradicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, nitro, cyano, thiocyanato and a radical of the formula  $-B^2-Y^2$ ,



- (X)<sub>n</sub> are n substituents X, where X in each case independently of one another, is halogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl, (C<sub>2</sub>-C<sub>6</sub>)-alkenyl, (C<sub>2</sub>-C<sub>6</sub>)-alkynyl, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy, (C<sub>2</sub>-C<sub>6</sub>)-alkenyloxy, (C<sub>2</sub>-C<sub>6</sub>)-alkynyloxy, [(C<sub>1</sub>-C<sub>4</sub>)-alkyl]-carbonyl, [(C<sub>1</sub>-C<sub>4</sub>)-alkoxy]-carbonyl or [(C<sub>1</sub>-C<sub>4</sub>)-alkylthio]-carbonyl, where the hydrocarbon-containing moieties in the 9 last-mentioned radicals are unsubstituted or substituted, or is a radical of the formula -B<sup>o</sup>-R<sup>o</sup>, where B<sup>o</sup> is as defined below and R<sup>o</sup> is an aromatic, saturated or partially saturated carbocyclic or heterocyclic radical, where the cyclic radical is substituted or unsubstituted,
- or two adjacent radicals X together are a fused-on cycle having 4 to 6 ring atoms which is carbocyclic or contains hetero ring atoms selected from the group consisting of O, S and N and which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C<sub>1</sub>-C<sub>4</sub>)-alkyl and oxo,
- n is 0, 1, 2, 3, 4 or 5,
- B<sup>o</sup>, B<sup>1</sup>, B<sup>2</sup> in each case independently of one another are a direct bond or a divalent group of the formula -O-, -S(O)<sub>p</sub>-, -S(O)<sub>p</sub>-O-, -O-S(O)<sub>p</sub>-, -CO-, -O-CO-, -CO-O-, -NR'-, -O-NR'-, -NR'-O-, -NR'-CO-, -CO-NR'-, where p = 0, 1 or 2 and R' is hydrogen, alkyl having 1 to 6 carbon atoms, phenyl, benzyl, cycloalkyl having 3 to 6 carbon atoms or alkanoyl having 1 to 6 carbon atoms,
- Y<sup>1</sup>, Y<sup>2</sup> in each case independently of one another are H or an acyclic hydrocarbon radical having in each case, for example, 1 to 20 carbon atoms or a cyclic hydrocarbon radical having 3 to 8 carbon atoms or a heterocyclic radical having 3 to 9 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where each of the three last-mentioned radicals is unsubstituted or substituted.
3. The herbicide combination as claimed in claim 1, which comprises,
- as component (A), one or more compounds of the formula (X)



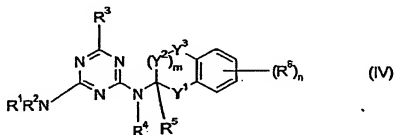
in which

$R^1$  is (C<sub>1</sub>-C<sub>4</sub>)-alkyl or (C<sub>1</sub>-C<sub>4</sub>)-haloalkyl;

$R^2$  is (C<sub>1</sub>-C<sub>4</sub>)-alkyl, (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl or (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl and

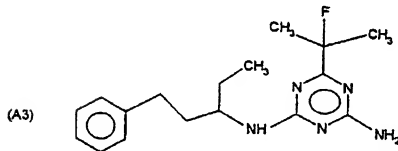
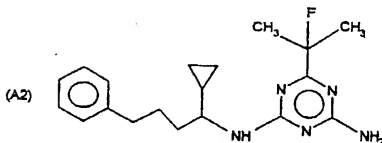
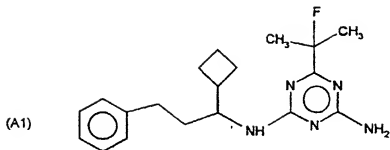
A is -CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>- or -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-.

4. The herbicide combination as claimed in claim 1, which comprises, as component (A), one or more compounds of the formula (IV) or salts thereof,



in which  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$ ,  $Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $m$  and  $n$  are as defined in claim 1 for formula (IV).

5. The herbicide combination as claimed in any of claims 1 to 3, which comprises, as component (A), one or more compounds of the formulae (A1), (A2) and (A3):



6. The herbicide combination as claimed in any of claims 1 to 5, which
- 5 comprises one or more further components selected from the group consisting of crop protection agents of a different type, additives which are customary in crop protection and formulation auxiliaries.
7. A method for controlling harmful plants, which comprises applying
- 10 the herbicides of the herbicide combination as defined in one or more of claims 1 to 6 together or separately, pre-emergence, post-emergence or pre- and post-emergence, to the plants, parts of plants, plant seeds or the area under cultivation.
- 15 8. The method as claimed in claim 7 for the selective control of harmful plants in crops of plants.

9. The method as claimed in claim 7 for the control of harmful plants in cereal.
- 5 10. The use of the herbicide combinations defined in any of claims 1 to 6 for controlling harmful plants.